

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Currently Amended) An optical scanning device for scanning a surface along a line, ~~which device comprises~~ comprising:

a radiation source unit for supplying at least one primary radiation beam,

an optical system for focusing the at least one primary radiation beam to a spot on the surface to be scanned, and

a rotatable polygon mirror comprising a number of mirror facets for deflecting the at least one primary radiation beam through a variable deflection angle, thereby obtaining a scanning beam, and to direct the scanning beam to a position on the surface to be scanned,

said optical system comprising:

a main imaging system which is arranged in ~~the~~ a first

radiation path of the scanning beam between the radiation source unit and the rotatable polygon mirror ~~and;~~

a correction system which is arranged in ~~the~~ a second radiation path of the scanning beam between the rotatable polygon mirror and the surface to be scanned, ~~characterized in that it comprises and~~

facet tracking means for deflecting the ~~focused at least one~~ primary radiation beam in synchronism with rotation of the rotatable polygon mirror such that ~~the chief a~~ ray of the primary beam is continuously directed at substantially ~~the centre a center~~ of ~~that a~~ facet of the mirror facets that is momentarily illuminated by the at least one primary radiation beam,

wherein the tracking means are operable to create a deflection point for the scanning beam, said deflection point being located between a center of rotation of the rotatable polygon mirror and the facet upon which the at least one primary radiation beam is momentarily incident.

Claim 2 (Canceled)

3. (Currently Amended) A The scanning device as claimed in claim 1, ~~characterized in that wherein~~ the facet tracking means are active tracking means, ~~which are~~ constituted by a beam deflector arranged in ~~the~~ a third radiation path between the radiation source unit and the main imaging system.

4. (Currently Amended) A The scanning device as claimed in claim 3, ~~characterized in that wherein~~ an additional lens is arranged between the beam deflector and the main imaging system to magnify the deflection produced by the beam deflector.

5. (Currently Amended) A The scanning device as claimed in claim 3, ~~characterized in that wherein~~ the beam deflector comprises a galvanometer mirror.

6. (Currently Amended) A The scanning device as claimed in claim 3, ~~characterized in that wherein~~ the beam deflector comprises a piezo electric deflector.

7. (Currently Amended) A scanning device as claimed in claim

3, ~~characterized in that wherein~~ the beam deflector comprises an acousto-optical deflector.

8. (Currently Amended) A-The scanning device as claimed in claim 3, ~~characterized in that wherein~~ the beam deflector comprises an electro-optical deflector.

9. (Currently Amended) A-The scanning device as claimed in claim 1, ~~characterized in that wherein~~ the facet tracking means are passive means comprising a facet tracking mirror, which receives the at least one primary radiation beam via a first reflection at the mirror facet and reflects the beam to the mirror facet for a second reflection at this facet to deflect the at least one primary radiation beam at an angle substantially smaller than the deflection angle of the scanning beam, before guiding the at least one primary radiation beam to the main imaging system.

10. (Currently Amended) A-The scanning device as claimed in claim 9, ~~characterized in that wherein~~ the facet-tracking mirror is a concave mirror.

11. (Currently Amended) A-The scanning device as claimed in claim 10, characterized in that the centre wherein a center of curvature of the concave mirror is located close to the a rotational axis of the polygon mirror.

12. (Currently Amended) An apparatus for processing a pattern in at least a surface layer of an object, which apparatus comprises a device for scanning the object surface with a radiation beam and means to modulate the intensity of the radiation beam according to the pattern, ~~characterized in that wherein~~ the device is a scanning device as claimed in claim 1.

13. (Currently Amended) An apparatus for point-wise retrieving details of an object, which apparatus comprises a device for scanning the object with a beam of radiation and a radiation-sensitive detection system to convert the beam of radiation from the object into an electrical signal, characterized in that wherein the device is a scanning device as claimed in claim 1.

14. (Currently Amended) ~~An~~ The apparatus as claimed in claim 13, ~~characterized in that wherein~~ the radiation-sensitive detection system and the scanning device are arranged at the same side of the object.

15. (Currently Amended) ~~An~~ The apparatus as claimed in claim 13, ~~characterized in that wherein~~ the radiation-sensitive detection system is arranged at the position of a radiation source of the scanning device and radiation source is arranged at the side of the object remote from the scanning device.

16. (New) An optical scanning device for scanning a surface along a line comprising:

a rotatable polygon mirror having mirror facets for deflecting the beam toward the surface;

a source unit for supplying a beam to a facet of the mirror facets; and

a facet tracker configured to deflect the beam in synchronism with rotation of the rotatable polygon mirror;

wherein the facet tracker is operable to create a deflection

point for the beam, the deflection point being located between a center of rotation of the rotatable polygon mirror and the facet.

17.(New) The optical scanning device of claim 16, wherein the deflection point is located substantially halfway between the center of rotation and the facet.